



IMPORTANT SAFETY INSTRUCTIONS READ AND SAVE THESE INSTRUCTIONS

<p>Proprietary Notice This manual pertains to proprietary devices manufactured by Terra Universal, Inc. Neither this document nor any portion of it may be reproduced in any way without prior written permission from Terra Universal.</p>	<p>Safety Notice A thorough familiarity with all operating guidelines is essential to safe operation of the product. Failure to observe safety precautions could result in poor performance, damage to the system or other property, or serious bodily injury or death. The following symbols are intended to call your attention to two levels of hazard involved in operation.</p>	
<p>Terra Universal makes no warranties applying to information contained in this manual or its suitability for any implied or inferred purpose. Terra Universal shall not be held liable for any errors this manual contains or for any damages that result from its use.</p>	 CAUTION	<p>Cautions are used when failure to observe instructions could result in significant damage to equipment.</p>
	 WARNING	<p>Warnings are used when failure to observe instructions or precautions could result in injury or death.</p>
<p>The information presented here is subject to change without notice.</p>		

1.0 Introduction

This manual provides information on installing and operating Terra Universal's Low-Profile Filter/Fan Unit. By studying this document carefully, you can be assured a long, efficient service life from the unit.

The Fan/Filter unit provides a steady laminar flow stream of HEPA filtered air to the area below the mounted unit.

2.0 Operation

The 2'x4' unit consists of two 160W, thermally protected, capacitor-run motors driving a backward-curved centrifugal blower. The 2'x2' and 2'x3' units use only one 160W motor. The 1'x1' uses a 65W motor. Air is drawn into the unit and pushed through an exit HEPA filter. The motors are controlled by a variable speed dial mounted to the outside of the unit.

3.0 Installation

The Fan/Filter unit is designed to fit on top of a Terra Laminar Flow Hood or standard clean room ceiling grid.



WARNING:
To reduce the risk of fire, electric shock, or injury to persons, do not use this fan with any solid-state speed control device, and observe the following:

- Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switch on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
- Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.
- When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.

4.0 Start up



WARNING:
Keep unit disconnected from power supply during inspection

Prior to providing power to the unit, check that no damage has occurred during shipping. This can be accomplished via a visual check to make sure there are no visible dents or penetrations. If the unit is intact, remove the HEPA filter and manually rotate the fan

wheel to make sure it is not in contact with any stationary parts and that there are no visible loose screws or bolts obstructing the wheel's rotation. Then connect the 4-pin power plug to the unit, set the speed switch to the desired position (units are shipped from the factory with the speed switch set to medium), and turn on the external power switch. With power applied, the fan will rotate, and filtered air will exit the HEPA filter.

5.0 Cleaning and Maintenance



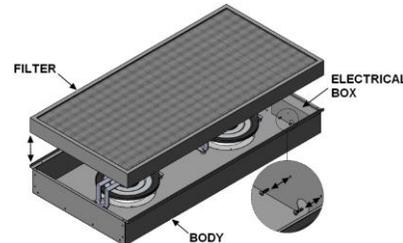
WARNING:
Disconnect from power supply before servicing unit. When servicing or replacing either filter, the new filter is to be installed in the same manner as the filter it replaces.

The scheduled maintenance of the unit depends on the installed location and consists of cleaning or changing the HEPA filter. The HEPA filter cannot be cleaned and should be replaced when either A) the pressure drop across the filter reaches twice the original resistance, or B) the air velocity exiting the filter rate falls below 70 feet/min.

Changing the HEPA filter requires removal of the unit from the ceiling grid. Place the unit on a flat work surface and remove the sheet metal screws that hold the HEPA filter to the body. Replace the filter with a new one and secure it to the case with the same screws before placing it back onto the ceiling grid.

Accessing the Electrical Compartment:

- Unscrew the filter from the body.
- Carefully flip over the whole fan filter unit so that the HEPA filter side is facing up.
- Carefully detach the filter from the rest of the unit. Do not touch the media or stack anything on it.
- Remove the two screws on the electrical box for access to the compartment.



6.0 Specifications

Dimensions:	2'x4': 23.625"W x 47.625"D x 8"H		
Housing:	White powder-coated cold-rolled steel or 304 stainless steel		
HEPA Filter:	99.97% efficient on removal of particles 0.3 microns and larger.		
Impeller:	Backward-curved centrifugal type factory balanced. Entire motor/blower assembly is removable from the inside of the unit. The filter must be removed to gain access to the blower.		
Motor:	160W Direct drive, energy efficient. Permanent split capacitor type. Thermally protected with automatic overload reset.		
Electrical:	Motor wiring is run to a variable-speed motor switch.		
Power Cord:	Straight, 4-pin cordset with plug included		
Face Grille:	Perforated anodized aluminum or 304 stainless steel		
Noise Level:	61-76 dBA depending on filter speed (measured at 6ft from filter face)		
Weight:	91 lbs. shipping weight		
Power Specs:	2'x4' (2 motors) = 120V, 50/60 Hz, 2.8A, 320W; 240V, 50/60 Hz, 1.4A, 320W 2'x2' and 2'x3' (1 motor) = 120V, 50/60 Hz, 1.4A, 160W; 240V, 50/60 Hz, 0.7A, 160W 1'x1' (1 motor) = 120V, 50/60Hz, 0.6A, 65W; 240V, 50/60Hz, 0.3A, 65W		

Air Speed (measured 24in. below filter face, model# 6601-24A-H-LP)

Flow (CFM)	808	561	279
Velocity (fpm)	120	77	42

Notes: All FFU data is based on a standalone unit using clean filters. Data will vary depending on filter media and configurations with other products/systems, such as ductwork or hoods.

7.0 Warranty

<https://www.terrauniversal.com/warranty>